

AMENDMENTS TO THE CLAIMS

Please amend claims 1, 2, and 13, such that the status of the claims is as follows:

1. (Currently Amended) A microactuation system comprising:

a load beam having a stationary region and a moving region;
means for flexibly coupling the stationary region of the load beam to the moving region of the load beam; and
means for selectively altering a position of ~~the a slider with respect to the rotatable disc~~, the means for selectively altering mounted to the means for flexibly coupling and the means for selectively altering extending from a distal end of the stationary region to a proximal end of the moving region generally along a longitudinal centerline of the stationary region.

2. (Currently Amended) A microactuation system comprising:

a load beam having a first section;
a flexure for supporting a slider carrying a transducing head;
a bending motor attached between the first section of the load beam and the flexure, the bending motor being deformable in response to a control signal applied thereto; and
a flexible beam having a first end and a second end, the first end being connected to ~~connected between~~ the first section of the load beam and the second end being connected to the flexure wherein the bending motor is attached to the flexible beam.

3. (Canceled)

4. (Previously Presented) The microactuation system of claim 2 wherein the bending motor is attached to a top surface of the flexible beam such that the flexible beam supports the bending motor and transforms a force on the flexure into a compressive load on the bending motor.

5. (Previously Presented) The microactuation system of claim 4 wherein the bending motor is constructed from a member of the group consisting of a piezoelectric material, an electroactive ceramic, an electroactive polymer, and an electrostrictive ceramic material.

6. (Previously Presented) The microactuation system of claim 2 wherein the load beam has a second section connected to the flexure, and further wherein the flexible beam is connected between the first section and the second section of the load beam.

7. (Previously Presented) The microactuation system of claim 2 wherein the bending motor comprises:

- a bottom electrode;

- an electroactive material on top of the bottom electrode, the electroactive material constructed such that it has two portions poled in opposite directions; and

- a top electrode on top of the electroactive material;

- wherein the electroactive material bends in plane in response to control signals supplied to the bottom electrode and the top electrode.

8. (Previously Presented) The microactuation system of claim 7 wherein the electroactive material is constructed from a member of the group consisting of a piezoelectric material, an electroactive ceramic, an electroactive polymer, and an electrostrictive ceramic material.

9. (Previously Presented) The microactuation system of claim 2 wherein the bending motor comprises:

a bottom electrode;
an electroactive material on top of the bottom electrode, the electroactive material uniformly poled;
a first top electrode disposed on top of a first longitudinal half of the electroactive material; and
a second top electrode disposed on top of a second longitudinal half of the electroactive material;
wherein the electroactive material bends in plane in response to control signals supplied to the bottom electrode and the first and second top electrodes.

10. (Previously Presented) The microactuation system of claim 2 wherein the bending motor comprises:

a bottom electrode;
a first electroactive element on the bottom electrode;
a shared electrode on the first electroactive element;
a second electroactive element on the shared electrode; and
a top electrode on the second electroactive element.

11. (Previously Presented) The microactuation system of claim 10 wherein the top electrode comprises:

a first top electrode element disposed on top of a first longitudinal half of the electroactive element; and
a second top electrode element disposed on top of a second longitudinal half of the electroactive element.

12. (Previously Presented) The microactuation system of claim 2 wherein the bending motor has a length to width ratio of at least about ten.

13. (Currently Amended) A suspension assembly comprising:

an actuator arm having a proximal end and a distal end;

a load beam attached to the distal end of the actuator arm, the load beam having a mounting region at a proximal end, a head suspension near a distal end of the load beam, and a flexible region between the mounting region and the head suspension;

a flexure configured to support a transducing head;

a beam having a first end and a second end, wherein the first end is connected to
connected between the head suspension and the second end is connected to
the flexure; and

a bending motor attached to a top surface of the beam such that the beam supports the bending motor and transforms a force on the flexure into a compressive load on the bending motor, the bending motor being deformable in response to a control signal applied thereto.

14. (Previously Presented) The suspension assembly of claim 13 wherein the beam is constructed from steel and has dimensions such that the in-plane resonance frequency of the beam and the distal portion of the head suspension is less than about three kilohertz.

15. (Previously Presented) The suspension assembly of claim 13 wherein the flexible region of the load beam includes a first flexible beam and a second flexible beam having transverse creases such that the load beam has a first mode out-of-plane resonance frequency of greater than about two kilohertz and a second mode out-of-plane resonance frequency of greater than about six kilohertz.

16. (Previously Presented) The suspension assembly of claim 13 wherein the bending motor comprises:

a plurality of piezoelectric elements, the piezoelectric elements deformable in response to an applied electric field;
a plurality of first and second top electrodes disposed on a top surface of the plurality of piezoelectric elements;
wherein each set of piezoelectric elements and first and second top electrodes are vertically stacked upon one another.

17. (Previously Presented) The suspension assembly of claim 16 further comprising:

a first endcap electrically coupled to each of the plurality of first top electrodes;
a second endcap electrically coupled to each of the plurality of second top electrodes.